



Data Collected Through HSLS:09

Module Objectives

- Describe the algebraic assessment
- Describe HSLS:09 questionnaires
- Present information on the response rates for the base year (9th grade)

Algebraic Assessment

- Designed specifically for HSLS:09
- Mathematics Advisory Panel (experts in mathematics assessment) developed the assessment framework

Algebraic Content Domains	Algebraic Reasoning Processes
1. The language of algebra	1. Demonstrating algebraic skills
2. Proportional relationships and change	2. Using representations of algebraic ideas
3. Linear equations, inequalities, and functions	3. Performing algebraic reasoning
4. Nonlinear equations, inequalities, and functions	4. Solving algebraic problems
5. Systems of equations	
6. Sequences and recursive relationships	

Algebraic Assessment (Continued)

- Web-based self-administered assessment
- In-school (majority of cases) or out-of-school (for select cases such as absentees and dropouts)
- The Base Year and First Follow-up were planned to use the same assessment, however, additional items of the highest difficulty level were added to the First Follow-up assessment for students routed to that level
- Information on Base year scores presented on the data file is available in Chapter 2, Section 2.3.3 of the [Base Year Data File Documentation \(DFD\)](#)
- Information on First Follow-up scores presented on the data file is available in the [First Follow-up Data File Documentation \(DFD\)](#)

Base Year and First Follow-up Questionnaires

Base Year	First Follow-up
<ul style="list-style-type: none">• Student questionnaire• Students' parent questionnaire• Students' math and science teacher questionnaire• Students' school counselor questionnaire• Students' school administrator questionnaire	<ul style="list-style-type: none">• Student questionnaire• Students' parent questionnaire• Students' school counselor questionnaire• Students' school administrator questionnaire

Student Questionnaire Overview



In-school session

- Self-administered
- Computerized

Out-of-school session

- Telephone interview (Base year)
- Computerized (First Follow-up)

Student Questionnaire – Base Year

- Demographic information and language background
- School experiences
- Attitudes about school, mathematics, and science
- High school, college, and career plans
- Educational and occupational expectations
- Locating questions

Student Questionnaire – First Follow-up

- Builds on the base year, and elaborates, expands on, and captures evolving attitudes and plans
 - Repeated measures include mathematics and self-identity, mathematics and science utility, and mathematics and science efficacy
 - New or updated items including postsecondary planning
- High school attendance, including enrollment status
- Demographic information
- Plans and preparations for the future including college choice and characteristics
- High school course taking and feelings about mathematics and science classes
- Academic and extracurricular activities
- Employment

Parent Questionnaire Overview

- Parent most knowledgeable about student's school situation and experience
- Self-administered via web or Computer Assisted Telephone Interview (CATI)
- Approximately 30 minutes to complete
- Abbreviated paper and pencil option



Parent Questionnaire – Base Year

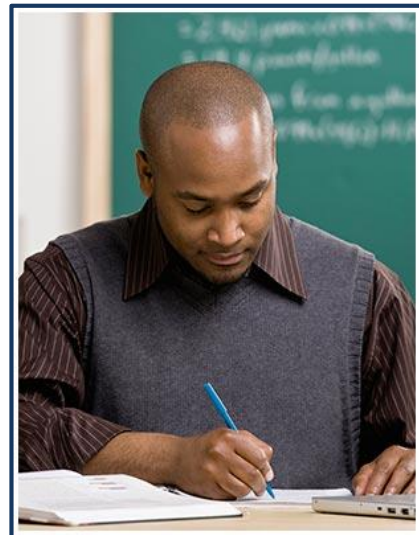
- Family structure and household members
- Parents' race/ethnicity, immigration status, language use, educational attainment, and occupation
- Household income
- Student's educational history (e.g., grade retention, school changes)
- Parental involvement in student's education and learning (e.g., school selection, school-based activities)
- Aspirations, plans and preparations for student's postsecondary education
- Expectations for type of, cost of, and contribution towards postsecondary education
- Future locating information

Parent Questionnaire – First Follow-up

- Household members
- Parents' demographics
- Parents' education and occupation
- Household income
- Student's enrollment status
- Household members
- Parents' demographics
- Parents' education and occupation
- Household income
- Student's enrollment status

Teacher (Mathematics and Science) Questionnaire Overview

- Base year only
- Approximately 30 minutes to complete
- Web-based or CATI
- Teachers who had an HSLS:09 student enrolled in their mathematics class
- Teachers who had an HSLS:09 student enrolled in their science class
- **Not** nationally representative of 9th grade mathematics and/or science teachers

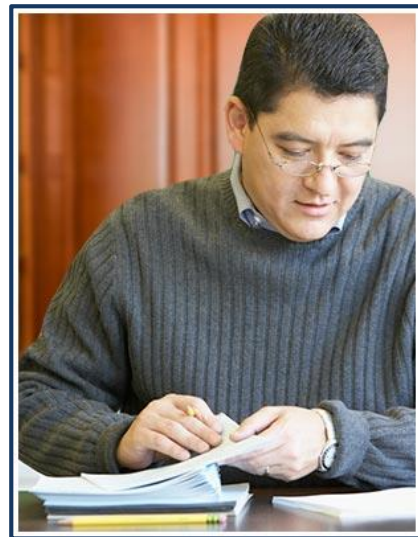


Teacher (Mathematics and Science) Questionnaire – Base Year, only

- Demographics, educational, and professional background information
- Beliefs about influence of student's home environment
- Beliefs about how mathematics and science abilities of males and females compare
- Class and department climate
 - Evaluation of faculty colleagues
 - How teaching assignments are made
 - Achievement level and preparedness of students in their courses
 - Teaching approaches and course objectives
- School climate
 - Evaluation of principal and faculty
 - Prevalence of various problems at school
- Barriers to effective teaching

School Administrator Questionnaire Overview

- Web-based or CATI
- Approximately 30 minutes to complete
- Completed by principal or another knowledgeable school staff member
 - Principal **must** complete section on principal characteristics
- For base year, data representative of school administrators
 - Can be analyzed at school-level
- Transfer school administrators also surveyed in the First Follow-up

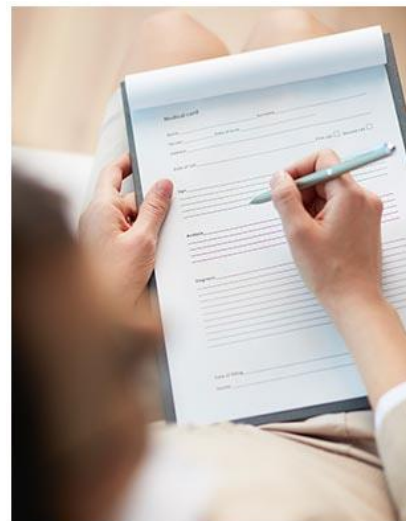


School Administrator Questionnaire – Base Year and First Follow-up

- School characteristics
- School effort to increase students' interest in mathematics and science
- Resources allocated to help struggling students
- Department characteristics
- Mathematics and science curriculum
- Information about the administrator

Counselor Questionnaire Overview

- Web-based or CATI
- Approximately 30 minutes to complete
- Head counselor at each school asked to complete survey – sometimes completed by another school counselor
- Data **not** representative of high school counselors



Counselor Questionnaire – Base Year

- Number of counselors on staff, certifications, average caseload, assignments, goals
- Counselor's educational and professional background
- Programs and services offered to students:
 - Enrichment courses
 - Assistance for struggling students
 - Dropout prevention programs
 - Transitions from middle school to high school and high school to postsecondary education and/or work
- Criteria used to place 9th graders and upperclassmen in mathematics and science courses

Counselor Questionnaire – First Follow-up

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|--|---|
| <ul style="list-style-type: none">• Number of counselors on staff, certifications, average caseload, assignments, goals• Criteria for placement in mathematics and science courses• Counselor's educational and professional background• Programs and services offered to students:<ul style="list-style-type: none">○ High school graduation○ Career/postsecondary education plans for students○ Support for low- and high-achieving students○ Remedial and enrichment summer classes | <ul style="list-style-type: none">• On-site GED preparation programs• Assistance with college entrance exams• Assistance with college financial planning/financial aid applications• Work preparation services and linkages with local employers |
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HSLS:09 Base Year and First Follow-up Data Yields

- Sample sizes
- Response rates

HSLS:09 Base Year Sample Sizes and Response Rates: 2009

Questionnaire	Eligible	Participated	Weighted Participant	Unweighted Participant
School	1,889	944	55.5	50.0
School administrator ¹	944	888	94.9	94.1
School counselor ¹	944	852	91.3	90.3
Student questionnaire ^{2,3}	25,206	21,444	85.7	85.1
Student assessment	25,206	20,781	83.0	82.4
Parent assessment ^{2,3}	25,206	16,995	67.5	67.4
School administrator ²	25,206	23,800	94.5	94.4
School counselor ²	25,206	22,790	90.0	90.4
Teacher questionnaire				
Math teacher ⁴	23,621	17,882	71.9	75.7
Science teacher ⁵	22,597	16,269	70.2	72.0

(See this table [online](#) on page vi for explanation of footnotes)

Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. High School Longitudinal Study of 2009 (HSLS:09) Base Year Data File Documentation (NCES 2011-328).

HSLS:09 First Follow-up Sample Sizes and Response Rates: 2012

Questionnaire	Eligible	Participated	Weighted Participant	Unweighted Participant
Base year schools ¹	939	904	†	96.3
School administrators	939	929	†	98.9
School counselors	939	925	†	98.5
Transfer schools ²	1822	1346	†	71.5
Administrators				
Student Questionnaire ^{3,4}	25,184	20,594	82.0	81.8
Student assessment ^{3,4}	25,184	18,507	73.0	73.5
Parent questionnaire ^{3,4}	11,952	8,651	72.5	72.4
School administrator ^{4,7}	23,432	22,498	95.4	96.0
School counselor ^{4,7,8}	20,858	20,601	98.6	98.8

(See this table **online** on page 46 for explanation of footnotes)

Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. High School Longitudinal Study of 2009 (HSLS:09) First Follow-up Data File Documentation (NCES 2014-361).

Module Summary and Resources**Summary**

- The algebraic assessment
- HSLS:09 questionnaires
- The response rates for the base year (9th grade)

Resources

- [Base Year Data File Documentation \(DFD\)](#)
- [First Follow-up Data File Documentation \(DFD\)](#)